



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

020457 LMI 2/0705  
ANTONELLI, LERRY STOUT AND KRAUS  
SUITE 1800  
1300 NORTH SEVENTEENTH STREET  
ARLINGTON VA 22209

07/05/00

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/167,444	09/29/98	024	NGUYEN, H 2784	07/05/00
First Named Applicant TANAKA,	35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION DATA RECONSTRUCTION METHOD AND SYSTEM EMPLOYING THE SAME

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
0 500.3110SCC4	714-006.000	075	UTILITY	NO	\$1210.00	10/05/00

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:**

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PATENT AND TRADEMARK OFFICE COPY

# Notice of Allowability

Application No.  
09/162,444

Applicant(s)

TANAKA ET AL

Examiner

HOA NGUYEN

Group Art Unit

2784



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to the amendment filed on 3/24/00, 4/7/00 and the interview of 4/7/00

☒ The allowed claim(s) is/are 18-21, 24, 26-44, now as, 1-24, respectively

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. \_\_\_\_\_.

☒ including changes required by the proposed drawing correction filed on Sep 29, 1998, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.**

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

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EXAMINER'S REASON FOR ALLOWANCE  
(Attachment to paper no. 16)

1. The following is an examiner's statement of reasons for allowance: the prior art of record considered as a whole fails to teach or suggest:

(a) Claim 18, an apparatus for storing data comprising a controller for performing of reconstructing data stored in any of the storage units in which a fault has occurred based on all other data belonging to any of the data groups to which the data to be reconstructed belongs and error correcting data corresponding to any of the data groups to which the data to reconstructed belongs, wherein the controller determines a preference to be given to the processing of reconstructing data.

(b) An apparatus for storing data comprising a controller for performing of reconstructing data stored in any of the storage units in which a fault has occurred based on all other data belonging to any of the data groups to which the data to be reconstructed belongs and error correcting data corresponding to any of the data groups to which the data to reconstructed belongs, and processing of data read/write requests from the host unit, wherein:

-claim 21, the controller determines whether to give preference to the processing of reconstructing data or to the processing of data read/write requests, and performs the processing to which preference is given based on a predetermined limit time.

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-claim 24, the controller controls an amount of time for the processing of reconstructing data within a unit time based on a predetermined limit time.

-claim 26, the controller controls an amount of the processing of reconstructing data based on a predetermined limit time.

-claim 27, the controller determines an amount of the processing of reconstructing data instead of the processing of read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 28, the controller performs the processing of reconstructing data in preference to the processing of data read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 29, the controller performs the processing of reconstructing data instead of the processing of read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 30, the controller gives a preference to the processing of data read/write requests and performs the processing of reconstructing data within a remaining time.

-claim 32, the controller determines an amount of the processing of reconstructing data instead of the processing of data read/write requests based on a predetermined time.

-claim 33, the controller determines a preference to be given to the processing of reconstructing data.

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-claim 36, the controller determines whether to give preference to the processing of reconstructing data or to the processing of data read/write requests and performs the processing to which preference is given based on a predetermined limit time.

-claim 37, the controller controls an amount of time for the processing of reconstructing data within a unit time based on a predetermined limit time.

-claim 38, the controller controls an amount of the processing of reconstructing data based on a predetermined limit time.

-claim 39, the controller determines an amount of the processing of reconstructing data instead of the processing of data read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 40, the controller performs the processing of reconstructing data in preference to the processing of data read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 41, the controller performs the processing of reconstructing data instead of the processing of data read/write requests such that the processing of reconstructing data is completed within a fixed period of time.

-claim 42, the controller gives a preference to the processing of data read/write requests and performs the processing of reconstructing data within a remaining time.

-claim 44, the controller determines an amount of the processing of reconstructing data instead of the processing of data read/write requests based on a predetermined time.

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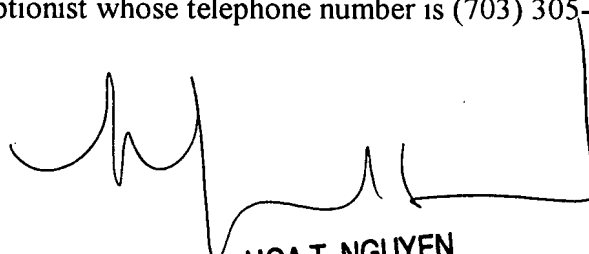
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. The supplemental amendment filed on 4/7/2000, the amendment of 3/24/2000 and the substitute specification of 3/24/2000 have been entered into the record.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Nguyen whose telephone number is (703) 305-9687.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady, can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.



HOA T. NGUYEN  
PRIMARY EXAMINER  
AU 2784